DOCUMENT RESUME

ED 053 656 HE 002 388

| | |
|---|---|
| AUTHOR | Bowman, James L. |
| TITLE | Some Thoughts and Reflections Regarding Parental Ability to Pay for Higher Education. |
| INSTITUTION | Educational Testing Service, Princeton, N.J. |
| PUB DATE | Dec 70 |
| NOTE | 25p. |
| AVAILABLE FROM | College Scholarship Service, Educational Testing Service, Princeton, New Jersey 08540 |
| EDRS PRICE | EDRS Price MF-$0.65 HC Not Available from EDRS. |
| DESCRIPTORS | *Educational Finance, *Family Income, *Financial Support, Higher Education, *Measurement Techniques, *Student Needs |

ABSTRACT

This paper discusses questions regarding standards used by the College Scholarship Service (CSS) to measure expected parental contributions to their children's college education. It deals with problems regarding establishment of low and moderate budget levels, family size, discretionary income, and alternative measurement procedures. After extensive discussion of proposed changes in CSS procedures, it is recommended that the current CSS curves of expectation be extended downward to provide for a negative contribution. (JS)

ED0 536656

# CSS

## Some Thoughts and Reflections Regarding Parental Ability to Pay for Higher Education

James L. Bowman

*December, 1970*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

HE 002 388

COLLEGE SCHOLARSHIP SERVICE

COLLEGE SCHOLARSHIP SERVICE

# SOME THOUGHTS AND REFLECTIONS REGARDING PARENTAL ABILITY TO PAY FOR HIGHER EDUCATION

James L. Bowman
Program Director, College Scholarship Service
Educational Testing Service, Princeton, New Jersey

December 1970

The College Scholarship Service is an activity of the College Entrance Examination Board. Operational services are administered by Educational Testing Service.

"The time has come, the walrus said,
to speak of many things-- of shoes and
ships and sealing wax, of cabbages and kings..."

To be more specific, the time has come to speak about the CSS levels of expected parental contribution toward the cost of higher education. In many respects, I'm beginning to feel that I have been through the looking glass with Alice and am now in a position that is somewhat analogous to the Mad Hatter's tea party, where everything was topsy turvy and nothing appeared as it really was!!

Considerable comment is presently heard regarding the CSS expected parental contribution levels--particularly those above the point at which a contribution of $1,800 would be expected (a range in effective income from $9,110 for the one-child family to $19,220 for the ten-child family). The troublesome aspect of the comments is that there are two different camps. On the one hand, many high-cost, private institutions say that the expected parental contributions for families above these income levels are <u>too low</u>. These institutions maintain that they are, in effect, subsidizing family consumption of other goods and services. On the other hand, many high-cost, private institutions also say that the expected parental contributions are <u>too high</u> for families above these income levels, and that students from these families would be unable to attend their institutions if the CSS analysis was strictly used. Economists, interested in social welfare, are also expressing concern that the whole concept of relative need and the CSS curves is inappropriate (particularly with respect to public sector funds) because some believe that aid is offered to students from families with higher income levels. This would mean that a lesser amount of total aid funds would be available for students from the lower income groups.

In addition, concern is being expressed over the appropriateness of the current CSS levels of the lower and moderate budget standards. At the time the current budget standards were adopted, the levels were based on the three standards of living for an urban family of four persons, spring 1967. The published levels were updated for spring 1968 price levels and modified to provide equivalent levels of living for families of different sizes. From the price levels in effect between April 1968 and April 1970, the consumer price index (CPI) for all items had increased 13 percent and continues to increase at an annual rate of about 6 percent. No changes have been made in the CSS curves to reflect this change in the cost of living, and, consequently, the standards currently used by CSS are out of date.

The same dichotomy appears to exist with respect to the differences in parental expectations for families of various sizes. There are institutions (particularly the ones having a significant proportion of large-size families in their population) who feel that insufficient allowance is made for the number of children in a family, and that the resulting expected parental contribution is too high. Conversely, there is equally strong feeling that the current differentials are too great and, therefore, the expected parental contributions are too low. As has been pointed out by Gertrude Weiss and me on several occasions, "...family size difference is one of the major problems associated with use of BLS data (or any consumption data, for that matter). Families with four or more children are so small a proportion of the total that any population sample on which statistical work is based cannot deal with them..."[1]

As we attempt to ameliorate the conflicting viewpoints that have been expressed regarding the CSS parental expectations, is it any wonder that we begin to feel like a participant in the following conversation:

"'Will you tell me which way I ought to go from here?'

---

[1] James L. Bowman and Gertrude S. Weiss. Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70. Princeton, New Jersey: Educational Testing Service, September 1969, p. 16.

'Depends on where you want to get to,' replied the Cheshire cat.

'Well, I really don't very much care,' replied Alice.

'Then, it doesn't matter much which way you go,' said the cat."

While at this point we really can't say where we want to "get to" on the question of parental expectation with any degree of certainty, we can explore the concepts behind "where we are at" and to suggest possible changes in the CSS curves for the committee's consideration.

At the outset, it may be advantageous to review the concept of discretionary income and the changes that have occurred with respect to the expected parental contribution from this source of income since the revision in the original CSS concepts in 1962. The 1962 revisions, which were generated by much the same comments as seem to be voiced today, were sparked by increasing concerns from the membership that the expectations from incomes below $6,000 were too high and expectations from incomes above $12,000 were too low. Since objective data were lacking, the marginal taxing rates that were developed were necessarily based on pragmatic, procedural decisions by the CSS Subcommittee on Computation. These decisions produced results generally considered desirable by the CSS participants who had expressed their feelings on this issue.[2] The percentage tax rates that resulted are shown in the following table:

PERCENTAGE TAX ON DISCRETIONARY INCOME
BY SIZE OF FAMILY
1962

| Discretionary Income | Number of Children | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| First $1,000 | 28% | 25% | 22% | 21% | 20% |
| Second $1,000 | 31 | 29 | 27 | 26 | 25 |
| Third $1,000 | 35 | 33 | 32 | 31 | 30 |
| Fourth $1,000 | 38 | 37 | 37 | 36 | 35 |
| Fifth $1,000 | 42 | 41 | 41 | 40 | 40 |
| Sixth and each succeeding $1,000 | 45 | 45 | 45 | 45 | 45 |

[2] Financial Aid Manual, 1962-63 Edition. College Scholarship Service, p. 47.

As is evident, the marginal rates of contribution were highly progressive with respect to income. One reason for the high degree of progressivity was that the Subcommittee on Computation felt the revisions in the expectations should not change the aggregate amount expected from families in the CSS population. As a consequence, the expectations from discretionary income were fixed mathematically so that the aggregate financial need of CSS filers was the same as had existed prior to the revisions. At that time there was no thought or plan for a large scale increase in available financial aid resources from governmental sources. The question which faced the Subcommittee on Computation was rather how should existing resources be most fairly divided among applicants. The result was that the pie remained the same but was sliced in a different manner.

The updating of the moderate level of income and the establishment in 1965 of new points of minimum expectations did not affect the marginal rates of contribution from discretionary income. As was pointed out at the time:

> "...adoption of the recommendation...(relative to the new moderate and poverty income points)...will have the effect of spreading the present curves of expectation from income over all income levels. No changes in the shape of the curves are derived by the marginal rates of contribution from income as discretionary income increases and is a problem separate from that involving determination of a poverty level of income and the development of an increase level approximating a 'moderate' level of living. Consequently, until such time as the marginal rates of contribution from discretionary income can be studied..., we recommend that the present rates of contribution be utilized for income levels above the 'moderate' level."[3]

---

[3] James L. Bowman and Gertrude S. Weiss. Suggestions for Adapting CSS Procedures for Use with Low-Income Families. Princeton, New Jersey: Educational Testing Service, April 1965, p. 6.

By 1966 it was the general feeling that the taxing rates from discretionary income, developed by "pragmatic, procedural decisions of the Subcommittee on Computation", were no longer appropriate. Increasingly, higher education was being viewed as a right and not a privilege. The Higher Education Act of 1965, together with continued growth in state programs, had broadened financial aid resources at institutions. Of great importance, too, was the continued spiral in college costs. The net effect was that the existing taxing rates were expecting unreasonable contributions from discretionary income, contributions that were not contemplated or visualized in 1962. An expectation of $2,800 toward college costs has little meaning to a family earning $13,000 if the actual costs of attending an institution are $1,800, for the "ceiling of contribution" is established at what the family must actually pay. On the other hand, as the costs of attending college rise, so does the effective "ceiling of contribution." The $2,800 expected contribution now becomes <u>real</u> if the college costs are $3,000.

As was pointed out at the time:

> "...that <u>some</u> revision of the current levels of expectation is required, there is no doubt--but what should determine the expected levels of contribution? To answer this with exactitude would require extensive data regarding motivations, family attitudes, exact costs and other data which, unfortunately, are not available..."[4]

On the other hand, it was pointed out that extensive data existed on general consumption patterns of American households, and it was proposed that CSS expected contributions from discretionary income be derived from spending patterns of families' own discretionary purchases.[5]

---

[4] Gertrude S. Weiss and James L. Bowman, <u>A Proposal for Modification of the Curves of Expectation</u>. Princeton, New Jersey: Educational Testing Service, November 1966, p. 3.

[5] <u>Ibid</u>, pp. 3-5.

Analysis of the consumption data contained in the Survey of Consumer Expenditures, 1960-61,[6] indicated that, generally, for families within the income ranges of $8,000 to $15,000, expenditures of a discretionary nature (for example, food away from home, education, recreation, automobiles, consumer durables, gifts, contributions, and savings) followed a pattern that allocated an increasing share of expenditures to those items as income increased and provided an "expenditure elasticity coefficient" of approximately 2.0.

It was proposed, in order to avoid arbitrary establishment of marginal taxing rates, that a third income point (to go with the previously established points of no contribution and the $800 maintenance contribution) be determined at the level where a contribution/income elasticity of 2.0 would result. In essence, this means for each doubling of income (100 percent increase), parents' contributions should be tripled (200 percent increase). A series of income points at which a $2,400 contribution would be expected was devised for various family sizes, using the effective moderate level of income and the $800 maintenance contribution as the bases.

This approach was similar to the philosophy of the then existing taxing system in that it involved appropriating increasing shares of discretionary income for education. It did, however, provide a more gradual progression in taxing rates, for the relationship between income points was linear and the marginal rates derived applied to larger segments of discretionary income than was true in the 1962 formulations. The result was a reduction in expected parental contributions from those families with discretionary income:

> "...in the upper-middle income ranges, from $10,000 to $17,500, the average contribution under the proposed system has decreased some $200 to $600. Above $17,500, the expected contribution has decreased markedly--this will have little effect on parents in this bracket, however, since the 'effective level of contribution'

---

[6] Survey of Consumer Expenditures, 1960-61. BLS Report No. 237-38, April 1964.

(dictated by the actual costs of attending an institution) are for all but a handful of institutions below the proposed contribution level. It is analogous to saying that a family has 'no need' (assuming a $3,000 budget) by $2,000 or by $600--under either criterion the family is presumed capable of providing for the educational costs without the assistance of financial aid..."[7]

A further reduction in expected contribution from discretionary income occurred as a result of updating the moderate income points to account for changes in the cost of living. This change, which became effective with the 1968-69 processing year, generally reduced contributions from discretionary income by $200 for the one-child family to about $400 for families with five or more children.

By 1969, as the cost of living continued its steady climb and as the costs of attending institutions of higher education continued to spiral upward, the situation faced by the CSS in 1961-62 was repeating itself. That is to say, there was a general feeling by financial aid officers that the CSS expectations from lower-income families were too high and those expected of higher-income families too low.

The first situation resulted from the fact that increases in the cost of living had exceeded the increases in the moderate standard made by CSS in 1968. In the case of the higher income families, the increase in college costs since 1967 had raised the "effective level of contribution" and families that were "no need" before were showing some evidence of financial need at high-cost institutions.[8] This, of course, was aggravated by the newly adopted procedures for treating families with more than one child in college.[9]

---

7 Weiss and Bowman, A Proposal for Modification of the Curves of Expectation, op. cit., p. 7.

8 Bowman and Weiss, Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70, op. cit., pp. 12-13.

9 James L. Bowman, An Alternate Approach to the Treatment of Educational Expenses for Additional Children Attending Institutions of Higher Education, A Proposal. Princeton, New Jersey: Educational Testing Service, November 1967.

As a result of these concerns, the CSS levels of expectation were revised in accordance with recently available data from the Bureau of Labor Statistics.[10] In 1969, the three budget standards (low, intermediate, and higher) were incorporated into CSS procedures, producing the following effective income points:

| Number of Children | Effective Income Level at: | | |
|---|---|---|---|
| | Low | Moderate | Higher |
| 1 | $4,460 | $ 6,660 | $ 9,110 |
| 2 | 5,570 | 8,250 | 11,400 |
| 3 | 6,550 | 9,700 | 13,400 |
| 4 | 7,350 | 10,880 | 15,030 |
| 5 | 7,800 | 11,550 | 15,940 |
| 6 | 8,250 | 12,210 | 16,850 |
| 7 | 8,650 | 12,740 | 17,580 |
| 8 | 8,920 | 13,200 | 18,220 |
| 9 | 9,180 | 13,600 | 18,720 |
| 10 | 9,410 | 13,930 | 19,220 |

After establishing new income points, revised expected contributions were developed for each standard of living, as follows:

| | |
|---|---|
| Low standard | $ 200 |
| Moderate standard | 900 |
| Higher standard | 1,800 |

By adopting the BLS standards and the related levels of income and expected contributions, CSS was able to develop a table of expected contributions based upon a series of income points derived from a common standard and pricing procedure, a situation which had not been previously possible. For incomes above the level indicated by the high standard, the use of a point elasticity technique was continued. The fourth income

10 Three Standards of Living for an Urban Family of Four Persons. BLS Bulletin No. 1570-5.

point was determined by using a point elasticity of 2.5 and the income and contribution levels of the high budget standard as the base. Adopting this procedure gave rise to a longer marginal taxing rate than was true under the original 2.0 elasticity concept and a concomitant increase in expected contribution. The effects of the changes on parental expectations were in accord with the then prevailing views of the using institution. Generally, for lower-income families, the changes reduced the expected contribution by approximately $200 on the average. For families in the middle ranges of income, the contribution remained essentially the same. For families in the higher income ranges, the expectations were substantially increased.[11]

With this information as background on the various developments that have affected the CSS levels of expected parental contribution over time and that have produced the current CSS curves, we can consider what future changes might be appropriate. The existing dichotomy with respect to the level of parental expectation from discretionary income is not one that is easily resolved. Serious consideration must be given (and is, through the work of the Cartter Committee) to clarify the role of CSS with respect to its needs analysis system and the concepts of the amounts parents ought to be expected to pay toward the costs of higher education. If the role of CSS is to serve as a national standard of objective measurement of ability to pay for higher education, then standards must be based upon the best available economic evidence of ability to pay and should, to the maximum extent possible, avoid subjective determination. On the other hand, if its role is to serve as a rationing device for available financial aid funds and to assist in the admissions problems of its user institutions, then standards must be dictated by considerations other than objective economic evidence. In the final analysis, it is not easy to make the distinctions that have just been set out. Many times the exact data required are not available

---

[11] Bowman and Weiss, Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70, op. cit., p. 14 ff.

and subjective determination must be exercised. It is felt that much of the current dichotomy is the result of the different roles in which CSS is viewed. Since 1964, CSS has attempted to restate the needs analysis system and base the levels of expectation in relation to current economic concepts and the best available evidence on parental ability to pay for higher education. In essence, CSS has set standards by which objective measurement could be made of the amount parents could reasonably be expected to contribute toward the higher education expenses of their children. I say reasonable expectation because, unlike a public taxing system, there is no way parents can be forced to make the contribution suggested. The law of the marketplace still operates -- if the price seems too high, consumer choice will be exercised and families will substitute low-cost colleges for high-cost colleges in order to minimize their real contribution. It is this very factor which creates the feeling that the current expectations from discretionary income are too high. The current admissions crisis in many high-cost private colleges is caused by consumers being unwilling to make the "real" contribution that is expected of them to attend a particular college and by substituting public, relatively low-cost institutions where their "real" contribution is substantially less. Since most of the high-cost private colleges base their financial aid decisions on need, in essence they are saying:

> "Parents are unwilling to make the real sacrifice that your curves impose upon them if they want to come to our college. Since they have no need, we can't give them any financial assistance. We want very much for their children to come to our institution. Consequently, you should change your curves because parents won't contribute that amount; then they will have financial need and we can offer them financial assistance and, hopefully, they will come to our institution."

The College Scholarship Service Council, the governing body of the College Scholarship Service Assembly, considered this dichotomy and reiterated its contention that the role of CSS is to serve as a national standard of objective measurement of ability to pay for higher education. The following passage from the transcript of the meeting is indicative of the feeling of the Council members at the time:

> "...the need analysis system has to be responsive to our best efforts to clearly analyze what a given family is able to pay. That makes us a national yardstick in making some assessments along that line. (If) this system becomes (a rationing device)...a fast way of justifying a lack of funds or a fast way of justifying giving money to a family that may not need it--then we ought to all close shop quickly.
>
> We cannot be, I don't think any national group can be, a rationer of funds and attempt to falsely make up for what isn't there. It would be the most hypocritical act that this service could perform."[12]

At any rate, some suggestions, based on the present state of the economy, can be made with respect to the current CSS procedures and related expectation levels that may tend to ameliorate some of the differences of opinion regarding the contributions that parents are expected to make.

The United States is in the grips of the worst inflation in twenty years, and the end is not in sight. The data that form the basis for the current CSS levels of expectation are based upon the price level that prevailed in the spring of 1968. Since that time, the CPI has increased approximately 13 percent as of spring of 1970, and continues to increase at an annual rate of about 6 percent. As a consequence, consideration should be given to increasing the present budget standards (low, moderate, and higher) to reflect the significant change that has

---

[12] Minutes of the College Scholarship Service Council Meeting. New York: September 14-15, 1970, p. 287.

occurred in the cost of living. Inasmuch as the CPI continues to increase--and the fact that some time lag will occur before implementation of any new levels of parental expectations--it is recommended that the current levels be increased by a cost of living factor of 20 percent. By following this procedure, and using updated family size differences, the following effective income points (income after taxes) for various size families would result:

| Number of Children | Effective Income Level at: | | |
|---|---|---|---|
| | Low | Moderate | Higher |
| 1 | $ 5,810 | $ 8,610 | $12,310 |
| 2 | 6,680 | 9,900 | 13,680 |
| 3 | 7,680 | 11,390 | 15,320 |
| 4 | 8,550 | 12,670 | 16,960 |
| 5 | 9,080 | 13,460 | 18,060 |
| 6 | 9,620 | 14,260 | 19,020 |
| 7 | 10,020 | 14,850 | 19,700 |
| 8 | 10,350 | 15,350 | 20,250 |
| 9 | 10,620 | 15,740 | 20,660 |
| 10 | 10,890 | 16,140 | 21,070 |

Having established new effective income points at the three budget standards, it is necessary to determine what the expected contribution should be since all families have an equivalent level of living. For the moderate level, maintenance cost estimates are derived by working backwards for the increases in the budget as family size increases. For example, budget costs for a family of three with a college-age child are estimated at $7,920; for a family of four, at $9,900. Accordingly, this extra person "costs" $1,980. As family size increases, the added cost decreases. The fifth child, for example, increases budget costs by $800. In order to provide a standard contribution for equivalent incomes at different family sizes, a weighted average budget change has been developed using CSS families as the population weights. The weighted average budget change for the different family sizes comes to $1,440.

Following current CSS procedures of taking three-fourths of this amount for a nine-month required maintenance would provide for an expectation of about $1,080. Consequently, at the new moderate standard, a required maintenance contribution of $1,100 should be expected.

The next question becomes: What should be the expected contribution at the low standard and higher standard? It is proposed that a $300 contribution be expected at income levels of the low standard and that this become the new base contribution expected by CSS. For families falling below the low-income standard, no contribution should be expected. At these levels of income, assistance to the child at school is most likely to take the form of continuation of a small allowance and some assistance with clothing purchases. These contributions, both in cash and in kind, are estimated at $300 for incomes at this revised low-budget standard.

Above the moderate standard, a more affluent and comfortable level of living prevails and additional support for the child may be expected. On the basis of changes in budget levels as families increase their living standards, it is estimated that an additional $1,300 could be expected at income levels approximating those at the higher budget standard.

By using these procedures, the following expected contributions at each of the three standards of living would result:

| | |
|---|---|
| Low standard | $ 300 |
| Moderate standard | 1,100 |
| Higher standard | 2,400 |

Revising the effective income points by the cost of the consumer price index and substituting the revised expected parental contribution at each of these new budget points would produce the following reduction in parental contributions from the current CSS levels of expectation:

| Number of Children | Reduction in Parental Contribution at: | | |
|---|---|---|---|
| | Low | Moderate | Higher |
| 1 | $350 | $530 | $980 |
| 2 | 190 | 270 | 300 |
| 3 | 150 | 210 | 40 |
| 4 | 140 | 200 | 0 |
| 5 | 140 | 200 | 0 |
| . | . | . | . |
| . | . | . | . |
| . | . | . | . |
| 10 | 140 | 200 | 0 |

Revising the three budget points by the change in the CPI produces significant reductions for income levels below those at which a $2,400 contribution can be expected. At the high budget standard, there is little or no change in the expected contribution for families with three or more children. This occurs because the increase in the CPI is offset by the revised family size differences being used.

It should be noted that the reduction in parental contribution resulting from adjustments in the cost of living index may have a perverse effect on the distribution of financial aid funds. To the extent that financial aid funds are limited, reduced family contributions make it difficult for financial aid officers to assist all needy students. The contention has recently been raised that any reduction in family ability to pay reduces the amount of financial aid funds available to disadvantaged students. This effect was pointed out at the CSS Colloquium on Financing Equal Opportunity in Higher Education held in the fall of 1969:

> "...within this stringent national picture, the net effect of the changes that took place between 1966 and early 1969 in the CSS family contribution tables are understandable, but, nonetheless, worrisome. They are understandable because

> whatever objective rationale may lie behind them, their greater generosity towards middle-income families puts many hard-pressed private colleges in a better position to compete financially with nearby public institutions for relatively prosperous students, and yet these changes do not violate the notion that scholarship stipends should be based on nationally computed financial need. But this understanding should not obscure the fact that if private colleges generally follow the changes implied by the new tables and award larger individual scholarship stipends to students, and if no major new scholarship sources are forthcoming, those changes in the CSS tables have made it significantly more difficult for private colleges to aid larger numbers of disadvantaged students..."[13]

This trend continues, of course, with the changes in expected parental contributions that are suggested by the change in the consumer price index. To the extent that parental ability to pay has been diminished due to changes in the economy, such a fact must be noted. How else can CSS serve as a national standard of objective measurement of ability to pay for higher education? How else can the gap between what is available as total financial aid funds and the aggregate need for such assistance be noted? The fact that changes in parental contribution may reduce the amount of aid available for disadvantaged students in the absence of increased aid sources is a matter for institutional policy. Ideally, all students with indicated need should be assisted by financial aid funds. However, in the absence of sufficient aid funds, the criteria must be that those students with the greatest indicated financial need are assisted first.

For families with incomes above the high standard, economic data regarding spending patterns do not exist. Consequently, any decision

---

[13] Humphrey Dorrmann, "Financial Aid for Disadvantaged Students in Private Universities," Financing Equal Opportunity in Higher Education. New York: College Entrance Examination Board. 1970. p. 29.

as to the amount that should be expected from families above the high standard (the point of $2,400 contribution) must necessarily be somewhat pragmatic.

In addition to the concerns that have been expressed regarding the level of parental contribution from discretionary income there have been comments regarding the differences in parental contributions for families with many children. Specifically, the question has been raised that insufficient weight has been given to the concept of "equality of sacrifice." It is not necessary to belabor the point as to what is meant by a state of equal sacrifice -- at least three distinct concepts have been advanced in taxation theory; i.e., equal absolute sacrifice, equal proportional sacrifice, and equal marginal sacrifice, each requiring a different taxing pattern.[14] Mainly, the question falls in the realm of equal marginal sacrifice.

The question that has been raised emphasizes the fact that the family size differences used by CSS are carried out over the entire income spectrum. This gives rise to "curves of expectation" that tend to diverge as income (and family size) increase. The criticism is that at some point along the income spectrum the marginal cost of the nth child is zero, and, consequently, there should be no difference in the expected contribution from the yth dollar due to the number of children.

The differences in the current CSS curves are solely a function of family size. Family size influences the income levels at which discretionary income is considered to be available, and it also influences the amount that is expected to be contributed out of that discretionary income.

Family size difference is one of the major problems associated with use of BLS data (or any consumption data). Families with four or more children are so small a proportion of the total that any population sample on which statistical work is based cannot deal with them. Even the CSS population has only 30 percent of families with four children or more, less than 15 percent with five or more children. Moreover, the statistical work on family size is not completely satisfactory.

---

[14] For an excellent summary of the sacrifice principle in ability to pay theory, see Richard A. Musgrave, A Theory of Public Finance.

The BLS method of determining family size differentials is based on the assumption that families have equivalent incomes when they spend the same proportion of income for food.[15] The Orshansky method[16] (currently being used by CSS for establishing family size differences) also depends on food costs, namely, that equivalent incomes are those which cover food costs when the same percent of income is spent for food. Thus, both depend on food costs or expenditures as a percent of the total. This is increasingly unsatisfactory as incomes go up and percent of food declines for the country as a whole, as well as for application at the higher income levels. Either method (BLS or Orshansky) shows generally similar results for families up to five children. Ideally, the expectation for larger-size families should be shown as "five or more," particularly since the rate of increase with family size decreases as you move along the scale. In order to provide family size differences for families with six or more children, it is necessary to extrapolate by pragmatic procedures.

The problem of the differences is aggravated by the use of the elasticity concept of determining expected contributions from income above the higher budget standard. In using the income points at which the high standard is included and the $2,400 contribution level as the base points for applying point elasticity, essentially the same differences are maintained throughout the entire curve spectrum. In addition to the differences in the income levels at which the high budget standard is reached for families of different size, there is a different marginal rate of taxation (or rate of expected contribution) due to the differences. For example, the marginal rate of contribution for income above the high budget standard for a one-child family is 49 percent but for a ten-child family it is 23 percent. That is to say, for every dollar above the high budget standard, the one-child family is expected to contribute 49 cents while the ten-child family is expected to contribute only 23

---

15 Revised Equivalence Scale for Estimating Equivalent Incomes on Budget Costs by Family Type. BLS Bulletin No. 1570-2. November 1968.

16 Mollie Orshansky, Counting the Poor: Another Look at the Poverty Profile. Social Security Bulletin, January 1965, pp. 3-29.

cents. In this regard, the CSS contribution system is different from the federal income tax system. In the latter case, family size differences are considered by using exemptions to reduce taxable income, but only a single rate structure is used in determining the amount of tax to be paid. In contrast, CSS can be regarded as having ten different exemption schedules and ten different rate structures. It is for this reason that the CSS curves do not parallel each other and will only converge at a level of income far above the "no need" level (under the elasticity concept the curves become "backward bending," where for every additional dollar of income you are expected to contribute more than a dollar in tax; this is, of course, extreme disutility of income!!).

It is possible to modify the current CSS procedures to take into account the concept of "equal marginal sacrifice," and this could be accomplished by using a system of measuring parental ability to pay analogous to the federal income tax structure. This methodology would require the development of taxing rate structure for determining the contribution from various levels of income. As to what the rate should be -- there is no definitive answer. It would have to be developed by somewhat pragmatic means. This was a situation which CSS hoped to avoid in 1965 by using the elasticity concept to develop marginal rates of taxation based upon expenditure patterns of American households. Since this concept has broken down to some extent for families in the upper income levels (due to the fact that no information exists on how such families spend their money) and the elasticity ratio has been changed arbitrarily, it might be appropriate to consider an alternative approach.

Such an approach could be provided by retaining the three budget standards of the Bureau of Labor Statistics to determine expected parental contribution for incomes below those at which a contribution of $2,400 is expected, and utilizing a single, progressive tax rate schedule for incomes above the high budget standard. This would provide a methodology of determining parental ability to pay analogous to the principles embodied in the federal income tax system and in many of the state taxing systems.

In the federal taxing system, distinction is made between families of various size by the use of an allowance for each family member claimed for income tax purposes. It should go without saying that a flat exemption allowance per person does not bear any relationship to differences in cost between families of varying sizes, but arises solely from acts of Congress. In 1913, when the modern income tax laws came into effect, a single person had an exemption of $3,000 and a couple had $4,000. The exemption for dependents, originally adopted in 1917 at $200, was increased to $400 in 1921, reduced to $350 in 1942, raised to $500 in 1944 when all personal expenditures for taxpayers, their sponsors, and their dependents, were made uniform. In 1948, the personal exemption was increased to $600 where it remained until the Tax Reform Act of 1969 provided for the current scheduled increases.

In the approach being proposed for the CSS, family size differences would be taken into consideration via the three BLS budget standards. At the high budget standard, ranging from an effective income of $12,310 for the one-child family to $21,070 for the ten-child family, different size familes are presumed to have the same equivalent levels of living. For incomes above those established by the high budget standards, the expected parental contribution toward educational costs would be determined by a single, progressive tax rate schedule. At these points, the curves of expectation would begin to parallel each other, since the shape of the curve (the marginal taxing rate) would be identical for all family sizes.

The next question becomes: What pattern of marginal taxing rates should be used in measuring parental ability to contribute from income above the high budget standards? Such rates could be established by pragmatic means to produce results that would seem generally appropriate. It is hoped that such action can be avoided. An alternative approach would be to use the elasticity concept to derive the initial marginal taxing rate above the high standard, and then to increase the marginal rates at an increasing rate in order to provide a progressive rate schedule. Following this procedure and using an elasticity ratio of

2.5, the average of the five- and six-child levels of income at the high budget standard (the mid-point of the CSS family size distribution) produces the following marginal rates of expected contribution from income:

| Income Above the High Budget Standard Levels: | Marginal Rate of Contribution |
|---|---|
| First $1,000 | 35% |
| Second 1,000 | 39% |
| Third 1,000 | 44% |
| Fourth 1,000 and above | 50% |

This proposed approach would mean that the two-child family would contribute $2,750 at an effective income level of $14,680 ($2,400 from income below the high budget standard of $13,680 and $350 from the $1,000 above this level). Similarly, the ten-child family would contribute $2,750 at an effective income level of $22,070 ($2,400 at the high budget standard of $21,070 and $350 for the $1,000 above this level). Under the proposed approach, there is an equal marginal sacrifice on the nth dollar above the amounts at which equivalent levels of living have been established.

If the recommendations are accepted, an analysis of the changes in contribution that would result for selected families and income levels can be made. Generally, for lower and middle income families, the expected contribution will be reduced. For families in the upper middle income levels, the contribution will be increased. This is particularly true of families with many children because of the use of updated family size differences in measuring equivalent incomes.

Heretofore, we have been extensively discussing proposed changes in the CSS system that affect parental contribution in the positive sense. However, the concept of vertical equity would suggest that changes should also be considered that would affect parental contributions in a negative sense.

The CSS has developed elaborate standards, widely applied throughout the country, for determining how much a family can be expected to contribute

toward the costs of higher education. At the present time, this is gradated down to the point where no contribution can be expected from the family. After that, no further gradation occurs.

For instance, the proposed revisions in the low standard for a two-child family means that such a family with income of $6,675 would be expected to make no contribution toward the expenses of college attendance. But a family who has even less income is implicitly considered to be in exactly the same kind of situation. They, too, are not expected to contribute and are not expected to have greater need for assistance. It would seem reasonable, however, to look at the income levels suggested by the low-budget standard as those levels where parents can afford no contribution toward the explicit costs of college attendance (the traditional "budget" costs used in financial need analysis). If the family income is even less than this, it is reasonable to suppose that they cannot even afford the implicit costs of college attendance. Implicit costs are assumed to be those associated with the provision of a suitable wardrobe, furnishings for dormitory rooms, and other items normally associated with students coming from middle class backgrounds. A family earning $6,500 and a similar family earning $3,000 are not in equal financial circumstances, and it would be an improvement in vertical equity to treat these two families unequally. This difference in financial circumstances could be indicated in CSS procedures by incorporating a negative contribution curve in its financial need analysis procedures.

It is recommended that the current CSS curves of expectation be extended downward to provide for a negative contribution, beginning at a point where family income approximates 80 percent of the low budget standard to a maximum negative contribution of $500 at the point where family income approximates 50 percent of the low budget standard. The $500 amount has been derived using Bureau of Labor Statistics pricing data and the wardrobe and furnishings requirements indicated for students coming from low socio-economic backgrounds.[17]

---

[17] I am indebted to James Robinson of the President's Commission on Equal Opportunity and the Chicago Inner City Financial Aid Officers Association for insight into the budget needs of low income students.

To illustrate how a negative contribution curve would be utilized, consider a two-parent, two-child family with an effective income of $3,500 and a college budget of $2,500:

Current CSS System

| | |
|---|---|
| College budget | $2,500 |
| Expected parental contribution | 0 |
| Estimated financial need | $2,500 |

Using a Negative Contribution System

| | |
|---|---|
| College budget | $2,500 |
| Expected parental contribution | (290) |
| Estimated financial need | $2,790 |

The use of a negative contribution curve can indicate the different budget needs of varying income levels--a sophistication that is lacking in current CSS methodology where all income levels below the low budget standard indicate a zero parental contribution.

A negative contribution curve could be utilized by the member colleges of the CSS Assembly in two ways. Ideally, colleges should recognize the special budget needs of students from low socio-economic families, and, in particular, those students from minority groups. In these cases, financial aid awards in excess of the indicated budget should be made. This would recognize not only the explicit costs of college attendance, but also the implicit costs to these families. When a college cannot financially recognize the implicit costs, due to lack of funds or institutional policy, the negative contribution curve would serve as a ranking device for setting priorities on existing funds. In such cases, students from low-income backgrounds would have a greater indicated need for financial assistance, and would receive priority in the allocation of institutional and public sector funds.

The negative contribution curves concept is a viable one for CSS and its incorporation in need analysis procedures is recommended.

Recommendations

It is recommended that the following revisions in the current CSS procedures relative to the determination of parental ability to pay for higher education be implemented in order to provide a more responsive and equitable system in light of current conditions in the economy:

1. That the current budget standards in use by CSS (low, moderate, and higher) for families of varying sizes be updated for a 20 percent change in the cost of living index and revised in accordance with new SSA family size differentials.

2. That the expected contribution at each of the three budget standards be revised to provide for:

| | |
|---|---|
| Low standard | $ 300 |
| Moderate standard | $1,100 |
| Higher standard | $2,400 |

3. That discretionary income above that indicated for the high budget standard be subject to a single, progressive marginal taxing schedule as follows:

| Income Above the High Budget Standard | Marginal Taxing Rate |
|---|---|
| First $1,000 | 35% |
| Second 1,000 | 39% |
| Third 1,000 | 44% |
| Fourth 1,000 and each succeeding $1,000 | 50% |

4. That a negative contribution curve be implemented in CSS procedures.